The Builder.

SATURDAY, AUGUST 5, 1854.

THE weather disposes one to excursionize and gossip: we succumb with good motives, glad to find that the road which pleases us is the right one. Life would be pleasanter with many if they could contrive to make these two points coincide oftener than they do. Our course last week was westward, — Bristol, Chepstow, Tintern, Gloucester, &c. and there are two reasons why we mention it,—first, that we may allude to the dinner of the **Canynge Society**, at Bristol, established to aid in the restoration of St. Mary Redcliff, — and secondly, because the British Archæological Association will meet at Chepstow on the 21st, and a few precursory notes may be useful, in leading some of the dwellers in close towns, where "sewers pollute the air," to get away into the country, and to invigorate both body and mind by communion with nature.

The Canynge dinner was presided over on this occasion by Mr. Richard Poole King, and the collection at the church and the muster at the dinner-table showed, to those who needed the evidence, the estimation in which that gentleman is held by his fellow citizens. Able, upright, and generous, he most worthily represents the merchants of Bristol.

The mayor made an excellent speech. Shame indeed, he exclaimed, as Canon Moseley had said in his sermon in the morning,—shame would it be to the memory of the merchant princes of Bristol, and to her citizens in this or any other age, if they permitted this building, at once the pride of the archæologist and the gratification of the antiquary, to become a matter of history. It did afford him great satisfaction to see the benefits which had arisen from the exertions of the Canynge Society, and he had much pleasure in acknowledging how much their labours had been aided by that philanthropic person, whoever he or she might happen to be, who had done such great things under the name of '*Nil Desperandum*.' Through the aid received from that source, they saw parts of the building standing out in a freshness and a vigour which gave confidence that the entire work would be completed sooner or later. He then glanced at the various works going on in Bristol,—new churches, new hospitals, the orphan asylum at Horfield, where 300 children are clothed, housed, and fed, without one shilling of funded property or a single known subscriber; and then urged all to do something while they lived,—something which might last all time, and keep them in the kindly remembrance of posterity.

The Lord Bishop of the diocese, in the course of his address, mentioned an intention that had passed through his mind of building a spire on St. Mary Redcliff, but which circumstances had led him to change into the erection of a church in his own parish.

Mr. Scandrett Harford, in proposing "*Nil Desperandum*," bore testimony to the manner in which the work of the north porch had been executed. In the revival of learning, observed the speaker, the cities which took the lead were principally the commercial cities, as Pisa, Florence, Venice, and Genoa; and their merchant princes were the foremost in the great work. There was an existing edifice at Pisa, much larger in proportions, but not equal in beauty to that of St. Mary Redcliff, which was the fruit of the liberality of the Pisans of those days. Many other edifices also had their rise in those times, from the same feelings. There were Canynges in Italy in those days. He need not allude to the princely house of the Medicis, or the Dorias, or others who took the lead in enterprises of this kind; but he merely mentioned the fact to remind the company of what commerce had effected, and what it ought to effect in these days.

Mr. Proctor, whose early exertions were loudly recognised, mentioned an interesting fact during his speech connected with the north porch. When the work was about to be commenced, in 1848, the committee applied for estimates of the cost, and he was astonished to find the accuracy with which the calculations of the parties tendering had been made. Messrs. Willcox and Son, of Bristol, sent in a tender for 2,500*l.*; Messrs. James and Co. of Bristol, 2,559*l.*; Messrs. Broad and Son, of Bristol, 2,618*l.*; and Mr. Myers, of London, 2,750*l.* The donor of the funds was not then prepared to make an engagement for so large an amount, but he undertook, if men were engaged by the week and stone bought, that he would supply money. The result had been, that the cost of the work so executed was about 2,600*l.* and he thought it highly creditable to the gentlemen who had tendered.

The architect being named, Mr. Godwin described what had been done, gave the particulars of a stained window for the south transept, for which funds had been raised by some ladies of the parish, and urged that if the works were not carried on more rapidly, a catastrophe would one day startle the west, and make it necessary to rebuild instead of repair.*

On hearing this, Mr. Harford offered 100*l.* towards the work, if nineteen other persons would give the same sum. Mr. Proctor said, he should be proud to be the second. The chairman added his name to the list, and the bishop, if we understood rightly, expressed his readiness to be the fourth.

Mr. Britton made an energetic and humorous speech; and allusion having been made to the circumstance that Mr. Charles Hill and others had come from London expressly to attend the dinner, the proceedings terminated. The report of the committee showed that since the last anniversary the society had contributed 350*l.* towards the restoration.

And now as to the road to be taken by the British Archæological Association, which circumstances led us to tread. On the first day (Monday) the association will confine themselves to their place of meeting, where the castle, church, remains of priory, the town, and the walls, with papers in the evening, will supply ample materials for employment and enjoyment. On Tuesday there will be an excursion to Mathern, Moynescourt, St. Pierre, Caldicot Castle, and various churches. The next day they will go to Piercefield-park, Wynd Cliff, and Tintern Abbey. On Thursday to Llandaff, Cardiff, Newport, St. Woolas, and Malpas Priory. Friday will be devoted to Caerleon, Usk, with its castle, church, priory remains, and encampments, and Raglan Castle. And on Saturday, Caerwent, Llanvair Castle, Penhow Castle and church, and Pencoed Castle, will be visited previously to the closing meeting.

The ride from Bristol to Aust, the Old Passage, is a pretty one, and when those who are with you are of the class who can find not merely "sermons in stones," but a moral essay in a buttercup, a lecture on taste in the lowly pimpernel, discomfort nowhere, and pleasure in everything, its enjoyments are immensely increased. The design for a bridge over the Severn here, with its openings of 1,100 feet each, talked of some time ago, has not been carried out. The rapidity of the current and the nature of the coast make it the worst important communication in the country: great delays and serious accidents often occur and lead to the hope that a bridge may one day be obtained here. Difficult as the task might be, its accomplishment is mainly a question of money.

When done it is to be hoped it will not be quite so ugly as the bridge over the Wye, at Chepstow, lately completed by Mr. Brunel, wherein the roadway over the water-way is supported by a wrought-iron tube 309 feet long, carried at each end on towers. Cast-iron cylinders filled with concrete carry the rest of the bridge, and the whole cost was about 65,000*l.* Without a word against the construction in point of science, in the art point of view it is the most unmitigated piece of ugliness that was ever perpetrated and deforms a noble view.

The Castle at Chepstow has not been properly investigated and illustrated yet. Its extent, the period over which its erection extends, the curious character of the building now called, erroneously, as it seems to us, the Chapel, would all lend additional interest to the investigation. The mass of the structure is of the Norman period (it was founded by Fitz-Osborne, Earl of Hereford, soon after the Conquest), but each of the three succeeding centuries has left its impress. The little chapel in the upper part of the keep deserves notice, and the carved figures on the merlons of the battlements will not escape it. The position of the Castle on a rock overhanging the river is very fine, and the masses of foliage in the ditch make it a beautiful object on the land side.

A thunderstorm here was a sight worth seeing. It began magnificently. First there was a dead stillness; then slowly and majestically passed up from the west a great wind, bending down the distant trees, and rushing steadily on, with a hoarse roar, till all its vassals, high and low, had bowed their heads before its omnipotence. Keeping them in subjection for some seconds, it shook off their leaves in showers, and then, satisfied with this exhibition of its power, it gradually relinquished its grasp, and each branch sank back to its usual quiet drooping. Down came the heavy storm-drops—slow and sullen at first, soon quick and petulant: loud roared the thunder, and faster fell the rain, till, presently, out shone the bright sun again, kissing away the storm-tears, and smiling soothingly on the sweet face of nature, rendered doubly beautiful by the struggle through which it had so meekly passed.

The church at Chepstow is Norman, and retains some interesting portions of the old work, in the west front especially, but it has been sadly dealt with by its repairers.

A short ride brings you to the Wynd Cliff, and a more exquisite scene than that which spreads before the eyes of the traveller when he reaches the top of it is not to be found in or out of England. Rich and luxuriant foliage mingled with bold crags spread away and away far below, deceiving the eye for a time as to the height from which the whole is viewed. Around the Wye spreads a natural amphitheatre of hills, and over these, bathed in a flood of golden sunlight, is the "princelie Severne" and its richly clothed banks. Rocks, wood, and water sparkle in the bright light, the colours varying every instant: now the masses of foliage grow dark and solid, and then the sullen stream darts into clearer view, a flood of glittering quicksilver.

* The scheme of the window now being executed by Mr. Wailes, may be thus described:—It is a lofty window in three stories. The upper range is to illustrate the foundation of the Mosaic and Patriarchal temple, consisting of rites and ceremonies without permanent resting-place, exemplified by figures of Melchisedic, Abraham, Moses, Joshua, and by subjects of Melchisedic offering bread and wine, sacrifice of Jacob, Burning Bush, Passing over Jordan. The second row is to illustrate the founding and building of the visible temple, exemplified by figures of David, Solomon, Ezra, and Nehemiah; and by subjects of David showing plan of temple to Solomon, building of first temple, Ezra receiving permission of Artaxerxes to rebuild the temple, building of the second temple. The lower range shows the Christian temple, to which the party commemorated made so large a contribution, as set forth in the figures of Matthew, Mark, Luke, and John; and in the subjects of feeding the hungry and giving drink to the stranger, clothing the naked, taking the stranger in, visiting the sick and prisoners.

We have time only to indicate,—not describe. Tintern Abbey was the next object sought, and right beautiful the well-kept ruin looked when it broke upon us, snugly lying in its peaceful valley. It is a grand specimen of the Geometrical style, belonging to the end of the thirteenth century, and will afford matter for a good paper. A merry party, from the High Sheriff of Gloucester the custodian said, had been shot into it, and were perseveringly sketching at all points. It is a noble ruin, and was then even fuller of beauty than usual.

The railway helped us to Gloucester next day, and then to London. Gloucester, with its beautiful cathedral, is very readily accessible from London. The excursion train is a good schoolmaster: the pleasure that will be given by its means, and the knowledge that will be imparted, are incalculable. We hope it will be taken advantage of to a great extent, and that, too, at once. "Divers," says Seneca, "have overpassed their life in only employing themselves in seeking out the instruments of life. Look into every particular, and consider the whole, there is no man's life but is aimed at to-morrow. Thou askest me what evil there is therein? Infinite; for they live not, but are to live; they defer all things."

ON THE PRESENT STATE OF TASTE IN ORNAMENTAL DESIGN.*

In mentioning "schools of drawing," I may be thought to have used a strange, unknown expression, as custom has called them "schools of design;" but I can find no other meaning in *écoles de dessin*, or *schuole di disegno*; and drawing has no need of being ashamed of its name. Another and a better title, "schools of art," has now been applied to them, and it is satisfactory to know that the talents of those to whom their management is committed are a guarantee for the instruction they afford, and are calculated to allay the apprehensions of any who might be disposed to think the original title tended to encourage the students in a belief that their particular calling was to invent "*designs*."

Hitherto drawing in this country has been ill-fated, though of such importance to every artist that none deserves the name unless he excels in it; and the neglect it meets with at once accounts for the faulty execution in this country of the many common subjects which are so admirably executed in France by the same class of draughtsmen. It is an indifference to the necessity of drawing that leads many a tyro, who scarcely has learnt to draw a line correctly (much less to make accurate studies of the human form, or to understand the art of grouping figures in a composition) to lay aside the pencil and adopt the brush, when he wonders, too late, that he has never been able to display the talent or obtain the credit of an acknowledged artist. And many even excuse their ignorance of drawing by some fallacy, such as, "there is no outline in nature," as if a real object could be delineated without *circumscribing its limits*.

But while drawing is so essential, it must be recollected that the use of the hand, and the direction given it by an accurate eye, will not suffice to *form taste*: they only afford the means of execution; and while we admire the skill of the French in drawing, and admit their inventive talent for design, we cannot be blind to their deficiency in that purity of feeling which marks the taste of Greece, or of Italy. They have the desire to excel, and the full conviction of their success; both useful in their way, for too great diffidence impedes exertion; and if their works often err in overwrought ornament, they may find an excuse in the injury received by their taste from the splendid monstrosities of Louis XIV. and the *rococo* of his successor. They have also long shown great proficiency in decorative art, as the palaces of their kings have proclaimed in the period of the Renaissance, in the embellishment of which both native as well as Italian artists were employed; and whoever may have been the sculptors who executed the statues at Rheims, and some other cathedrals of France, it is evident that good art was highly appreciated and executed even at the beginning of the thirteenth century in that country. And while mentioning the skill of the French in design, it would be unjust not to speak with commendation of that of Belgium, which is the more remarkable as it is not confined to decorative art; and every one will admit the high position that country has taken in sculpture and the highest branches of wood carving. But whatever praise may be justly bestowed on French taste in certain branches of decorative art, and however much they may have encouraged it, it is by no means desirable that we should follow them as models; for while many of their ornamental works are creditable, they are too often deficient in breadth of style, in grandeur, or simplicity, and disfigured by elongated proportions, broken outlines, and meretricious ornament. Nor can an exaggerated sentiment be compensated for by invention, fancy, or minuteness of detail. Their figures, too, offend from a voluptuousness and theatrical treatment, as well as from too much of the academic study; and they fail in ideality and the elevation of high art. They are also apt to appear conscious of being looked at, and you feel sure if they could speak, it would be in French. Indeed, if Gallicism is found to have done an injury to the taste of Benvenuto Cellini (as shown in his Diana of Fontainebleau and various works he executed in France), as well as to that of some other Italian artists, we may feel sure that the French, talented as they are, should not be blindly imitated.

The great point, both in enabling the hand to execute, and in giving the power of appreciating the beautiful, is the education of the eye; for, as the ear is the judge of sound, so the eye perceives the harmony of proportion, form, colour, and every other condition, on which beauty depends. Proportion I place first, because it speaks most immediately to the eye; and no amount of excellence in form or details will compensate for a disregard of it. Nor would the most elegant Greek vase, or the most classical building, continue to be beautiful, if its proportion were altered. What would so many Italian monuments that command our admiration be without it? and the beautiful fountains before St. Peter's, at Rome, if copied by an unskilful eye, might easily be made to assume the graceless and unmeaning character of our dumb-waiters. The column of water is also as necessary for the maintenance of proportion as the basins into which it falls; and arbitrary or incongruous combinations should be avoided, whatever the character of a fountain may be: thus, an elephant spouting forth water is unnatural and monstrous; nor should the water run down stairs, for though the caprice was adopted by the Arabs and by the Italians, it is the result of bad taste and poverty of invention. Nor should a fountain obtain any merit for throwing up a column of water to an immense height, beyond that of being the largest of squirts; and its claims for precedence should be laid among hydraulic machines, instead of works of taste.

In no country of the present day is the harmony of proportion so well understood as in Italy; and no where is its importance so clearly perceived as in the buildings of that country, where it oftentimes happens that at first sight you are charmed with the effect of an edifice which, on closer examination, is found to be deficient in form and in many of its details, or replete with the barbarisms of broken outlines and the excrescences of a debased style. And when such imperfections of form as well as of details are concealed by the general effect produced by the symmetry of proportion, it is evident how essential this last is for captivating the eye and giving the impression of beauty.

As the perception of proportion, like the accuracy of the ear in judging of sound, is a natural gift to some persons, it may be improved by, and requires, study; and it may be taught, like music, to all who are not destitute of every feeling for harmony. Some, indeed, are incapable of comprehending it, as some are unable to distinguish colours; but the habit of seeing and having the attention drawn to it, may even go far towards instructing the generality of men, who, at all events, would otherwise be left in a wilderness of error. It is, indeed, easier to detect imperfections in form and detail than in proportion; and as the perception of this taste is of the highest importance in judging of effect, and as it has the greatest influence on the eye of all who appreciate beauty, so it is the last to which the uncultivated taste attains. Professor Cockerell observes, "that we begin by admiring ornaments, details, and forms, but it is in a more advanced stage only that we make all these subordinate to that sense of mythical proportion and that harmony of quantities which affect the mind like a mathematical truth; and like a concord of musical sounds on the ear, are perceived, and confessed as obvious and unalterable." . . . "Custom, convention, and often incapacity of discernment, reconcile us to those proportions we are most used to, and we are blind to those defects which a fresh and accomplished eye is at once shocked at; yet the sense of vision so studied by the Greeks is to be educated, like a real moral sense and every other, by the diligent culture of science." . . . "The informed artist recognizes the claim which this great element of art has above all others on his studious attention." . . . "He seizes with delight any rule that will conduct his works to the excellence so apparent and so universally admitted in the Greek proportions; he rejoices in any of the slightest elements of the grammar and syntax, by which he can attain to their eloquent language; and he confesses that without them all is confusion, hazard, and fashion."

Good and well-defined rules are, indeed, most necessary in this, as in every other, study: even those few who possess a natural perception of the beautiful are benefitted by them; and the generality of men cannot receive proper impressions without their aid. Nor can instruction be imparted to a beginner without enabling him to understand what the eye is taught to admire. Rules, too, are required for correcting such caprices as tend to mislead the taste; and the unfledged beginner must be content to be guided by them, until he has received the power of independent flight. But taste while kept in order and directed by rules, should not be wholly *dependent* on them: they may be the leading-strings of the tyro, not his crutches, on which, when grown up, he is to rely; and unless he can then afford to act without being dependent upon them, he will never rise above mediocrity and conventional art. Nor can rules be framed until a subject has been long studied and thoroughly understood. It was too great a subserviency to fixed rules that cramped the arts in ancient Egypt, which never escaped from the trammels of conventionalism. The conventional is of its own age and country, and is destined to perish. Not so real taste, which is of all ages, and of every country which has the talent to comprehend it; and flourishes in proportion as it is free. The genius of the Greeks could not submit to be fettered; and it is right to bear in mind that no new successful effort of genius was hampered by, or dependent on, mere rules.

Rules embody, and convey to students, what experience has established, and they guard against error; but no art ever began with rules, as grammars never formed a language; and what Horace says of words,—

"Multa renascentur quæ jam cecidere, cadentque
Quæ nunc sunt in honore vocabula, si volet usus;
Quem penes arbitrium est, et jus, et norma loquendi,"

holds equally true with regard to ornamental design. But the changes or innovations must be such as taste and good judgment can sanction; and though genius may be encouraged to invent, arbitrary ornament should not be tolerated, nor changes be made for a mere desire of novelty. No ram's horns should be substituted for volutes in an Ionic capital; no copies of natural objects should compose a work of decorative art; and no borrowing from a design of a totally different character should be resorted

* See page 387, ante.

to in order to make up a deficient corner. It should have one motive or intention throughout:

"Servetur ad imum
Qualis ab incepto processerit, et sibi constet;"

and many a Horatian maxim laid down for poetry may well be applied as a rule in æsthetic art.

The early steps made by the Greeks were gradual and judicious: they borrowed much from the styles of older people with whom they came in contact, and the same adoption and adaptation of other notions (*parce detorta*) are seen to the last in the various details borrowed from "the barbarian," but which, by being made really beautiful, became their own. They did not borrow *in order* to compose a new design, but because what they selected suited it. This remark is of course only applied to their ornamental art, not to their sculpture of the human figure; and though this last had in early times a rude character, owing to their imperfect skill in representing it, they gradually improved and attained to a nearer approach to truth as they advanced. But neither at first, nor after their taste had become formed, did they confine themselves to conventional rules; and even their architecture was free from the trammels to which we have subjected it. The proportions of a temple were not laid down according to fixed measures, without reference to the position it was to have: they consulted their eye rather than their compasses; and a column was not necessarily of the same number of diameters *because* it was of this or that particular order. Hence it happened that no two Greek temples,—no two sets of columns of the same order in different buildings,—were of the same proportion; as no two temples were confined to the same kind of site.

Among many mistakes made in modern Europe is the custom of representing pictures on materials ill-suited for the purpose: another is to make ornaments in decorative art direct imitations of material objects. Even certain materials are suited to particular kinds of art; and thus panel, canvas, and the fresco wall are those most proper for paintings. In all of these, near and distant objects and the various degrees of distance can be represented with proper effect, by the distinctions of colour as well as by the effect of aërial perspective. But when metal, stone, and similar materials are employed to represent landscapes, or a number of distant figures in bas relief, it is evident that they attempt what is out of their province: the absence of aërial perspective in the metal or stone confuses the foreground with the distance, and they both continue to appear (as they are) on the same plane. Sculpture, therefore, should abstain from a mode of treatment beyond its own sphere. It has its own vocation distinct from that of painting, and it only injures its own credit by aiming at that which belongs to the sister art.

The error abounded in the middle ages; but the Greeks were satisfied in bas-relief with figures in the foreground; and the same maxim recommended by Horace for the stage,—"*Nec quarta loqui persona laboret*,"—led them to avoid the introduction of figures four deep upon the stone. They had no bas-relief in marble or bronze representing the battle of Marathon, still less that of Salamis: similar subjects were reserved for painting; and it was for the tasteless Romans to disregard that principle, by representing the confusion of battles upon such unsuitable materials. Nothing but the exquisite skill of a Ghiberti could make us tolerate background landscape, and distant as well as near figures in bas-relief, or the different actions of the same persons, on one field; and however we may admire the execution of the beautiful gates of the Florence baptistery, the introduction of background in bronze or marble is an unjustifiable liberty. Stone and metal are suited to statues and bas-reliefs, not to *pictures;* and the same applies to wood and other materials, where objects are carved upon them; nor should a landscape be tolerated on a fictile vase, nor even as a coloured painting on a porcelain cup. This is one of several faults in the sumptuous vases of Sèvres manufacture; which also not uncommonly offend in proportion, and in an extravagant richness of decoration. There, too, we often find the picture of a landscape or a building not only disagreeably contrasting with the tawdry gilding or the heavy colour of the surrounding groundwork, but placed in a square compartment at the front (or back), which is therefore cut in half as you walk to the side, and ceases then to form part of the ornamentation or general effect. A subject to decorate a vase should be so placed upon it, that some equally interesting portion of it should always be before the eye; like those bas-reliefs so admirably introduced on the best Greek vases.

And when, which is sometimes the case, the Greeks placed figures as a central picture, it may either find an excuse from the vase having been intended to stand where it could only have been seen in front, or may be used as one of many arguments to show that even *they* were not always right, and must not be *blindly* imitated for their name alone.

The same adaptability of material applies to the representations of pictures on tapestry, worsted work, and the like; which, after all, are only imperfect copies of copies; and however well they may be executed, they only excite our admiration in proportion to the difficulty or the improbability of success on such unsuitable substances. They aspire to what is out of their sphere, and they fail to succeed in what they profess; for, after all, the picture, be it ever so good, is always inferior as a picture, and all the labour has been spent to produce what is imperfect. To attempt what can only be deficient must necessarily be a wrong principle; and what can be farther from art, than a design in worsted work, where every line is broken up into a minute staircase?

Whatever belongs to decorative design, must be subservient to its conditions; and if, as is sometimes permitted, a small picture forms part of that design, it must conform to the general effect, as in the ceilings of the Vatican and other Italian buildings, where medallions and vignettes are admitted into the general decorative composition. Even fresco painting is bound to suit its effect to the ornamentation of a building, and whatever is part of a design, must accord and harmonize with it; while this must itself be subordinate to, and depend upon, the general features of the building. No better examples can be given than by Giotto's chapel of the Arena, at Padua, and the library of Siena Cathedral; which also present admirable specimens of the mode of decorating large flat surfaces with paintings, and a perfect effect of richness of colour and unity of design.

Pictures on panel and canvas are not subject to the same condition of ornamentation as wall-paintings: they claim, and have obtained, a separate place and distinct admiration, irrespective of the decoration of the wall on which they hang, and of which they form no part.

The imitation of natural objects for ornamental purposes usually disagrees both with the materials used and the place where introduced. It is also an indication of poverty of invention, and a deficiency of taste for design. In a carpet where roses and other flowers are figured, we find the same impossibility of correct representation already mentioned: the very best rose is always unlike the reality, while the imagination is diverted from the general effect by the comparison of this imperfect copy with the natural flower. The same objection applies to imitations of architecture, or any other real object on a carpet; and the nearer the resemblance, the more glaring the inconsistency of making you appear to crush roses, or trip over the tracery of a Gothic window.

Not so with patterns, which are what they pretend to be, which aim at proper effect in form and colour, and which answer their real purpose—ornament—without disturbing the imagination or proclaiming their own incapacity. They decorate instead of affecting to represent; and thus it is that the graceful combinations in Saracenic, Byzantine, and other patterns delight the eye, while they perform most completely the object they have in view. Nor are they limited in their colour, as when nature is copied; and they assume whatever use may suit the general harmony of the whole design without violence to truth.

The Greeks were fully alive to this. Their mouldings were not servile copies of flowers or other natural objects: they took the idea, the *motive*, of the object and made it an ideal imitation, which was much more pleasing to the eye than the imperfect attempt at representation in an unsuitable material; and it is evident that no copy of a real honeysuckle would have been as beautiful an ornament as the conventional flower and leaf we see in a Greek building. The same idea was carried out by them in fancy borders, on walls, vases, furniture, dresses, and objects of common use; and, generally speaking, in all ornamental decoration where figures were not introduced. It was only in the decadence of art that they adopted a somewhat closer imitation of real flowers, as on the vases of Apulia. With the Greeks "the beautiful and the good" were closely allied; and if they did not, like one great German writer, include the good in the beautiful, or consider the latter the higher of the two, they thought that nothing in art could be good without being beautiful; and to be καλος και αγαθος, "beautiful and good," was the highest merit even in man.

The same feeling and ideal conception of the beautiful enabled them (as I have already observed) to perceive, in the ornaments of people less cultivated than themselves, whatever possessed the germ of beauty, and whatever they did borrow they improved. Nor was this unworthy of their genius; and it would be well for us to recollect that the most accomplished minds have not been above the adoption of what was beautiful from other sources. They preferred what was good to what was merely new. Nor was novelty the same recommendation to the Greeks as to us; and when our vendors of ornamental works assure us that they are the "newest" instead of the "best," and when good things go out of fashion to give way to some fanciful novelty, we may vainly hope for taste either in the maker or the public. The Greeks, on the contrary, repeated the same favourite design for years, when once pronounced good; and when brought within the reach of all, it was common without being considered "vulgar:" old types were also reproduced under new forms, and new ones were not devised by them because new ones were required, but because they were suggested by their genius. Theirs was not a manufacture of novelties, nor did their talents pander to the cravings of wealthy caprice, and neglect the more important duty of beautifying objects of daily use and humble life.

Among the common errors of people deficient in judgment, and particularly of the English, are a blind admiration for the works of foreigners, often without the necessary inquiry into their merits, and a disregard for greater talent in their own countrymen. Nowhere is this more striking than in the slight regard paid to the wonderful genius of our Flaxman, who, had he been Herr Flackmann, might have obtained the praise he merits here, and obtains abroad. We disregard the "prophet in his own country," and take the "*ignotum pro magnifico*" with complacent innocence; as we pronounce many manufactured articles imported from France to be far superior to our own, without dreaming of their being the re-imported productions of English artisans; and a vocalist might have less chance of admiration under the name of *Mrs. Green* than under that of *Signora Verde*.

The mixture of dissimilar substances and counterfeit imitations are to be avoided, equally with the unsuitable materials already mentioned. The union of bronze (and above all of bright brass) and wood is also objectionable; and even some of the much-prized tables of Florence, in *pietre dure*, imitating birds, flowers, and other natural objects, do not accord with right principles. These are objects of wonderful skill and costly magnificence, exciting a feeling of surprise at the execution, rather than of admiration for the design.

The same may be said of the rich cabinets

inlaid with brilliant stones and costly jewels, where the artist seems to have sought to make splendid what he failed to make beautiful; and where the tortured outlines, the twists, scroll-formed mouldings, and distorted framework, which usually form a conspicuous part of them, proclaim the absence of all feeling for elegance and purity of design; and if a higher style of work is attempted, by the substitution of human figures for the legs, it falls as far short of nature and of art as the sculptures of the South Sea islanders. Such pieces of furniture excited the general admiration of their time; though a clumsy superstructure, on slender deformed legs, might call to mind the corpulent body and emaciated limbs of some old-fashioned dotard.

Again, a statue or a temple, made of glass, is inconsistent and objectionable; and even a vase, originally executed in stone, and designed for that material, rarely bears the same character when copied exactly in metal, pottery, or other substance; and form, treatment, and design must often vary according to these conditions. False imitations are mean: a cast-iron vase can barely find an excuse in its durability for intruding where a fictile one would not be safe; and a painted counterfeit has the sad pretensions of a rouged face. Nor can a pretended bronze statue of painted gypsum find a good excuse in cheapness, however we may allow it to the common, unpretending, white cast. Again, the glass body of a vase, with a metal handle, foot, or border, besides inconsistency, conveys a disagreeable feeling of insecurity in its use, from the greater and less durability of the two materials; and you fear lest some accident should leave the handle alone in your grasp. A want of skill in the maker is also implied by the completion of his work in a different substance.

Many a glass or porcelain vase might remain without handles if the maker did not apply in his embarrassment to a friend in another trade; and as the good-natured smith has come to the rescue on one occasion, he is naturally appealed to on another. A glass, therefore having accidentally come out as a long cup (fig. 1), without a foot to stand upon, the smith is again solicited to supply the deficient member; and lest any superior invention should contrast too strongly with the poverty of the original cup, the metal stand humbly imitates its companion, and finds its own security in a mass of nondescript ground-work, or imaginary vegetation (fig. 2). It

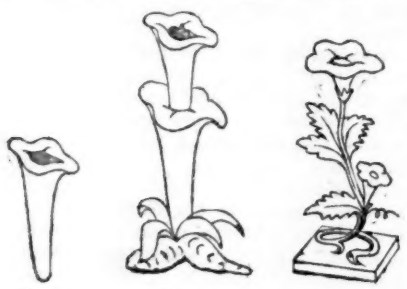

Fig. 1. Fig. 2. Fig. 3.

will be fortunate, too, if its deformity is not increased by the contrast of metals of two different colours, besides that of metal and porcelain in the flower, as so often seen in fanciful candlesticks, and other objects supposed to be ornamental (fig. 3).

But mixture of materials is not always resorted to in order to escape from a dilemma: it is frequently thought to be an improvement, and a sign of taste; and a brass, gilt, or silver snake is coiled round the glass, for the double purpose of ornament and support (fig. 4). Sometimes, however, the dependence on metal being scorned, the woman-loved reptile is of the same material, and an opaque blue glass snake winds round the transparent bottle (fig. 5). This may remove one objection, but still leaves that of poverty of design; as when a glass imitates a pineapple, which, too, is generally found to borrow the foot of a tumbler to adapt it for use (fig. 6).

Still more objectionable are the combination of two different ideas and two incompatible natures to form a design; and the union "of the ugly fish and the beautiful woman," "the dolphin in the wood and the boar in the sea," denounced by Horace, are not more inconsistent than many of the anomalies produced daily by our *constructors* of designs. In one a man sits on a truncated column, with the branches of a candlestick growing luxuriantly from his head, while he plays a lyre, like "Orpheus, the mover of woods" (fig. 7): in another a stork performs the

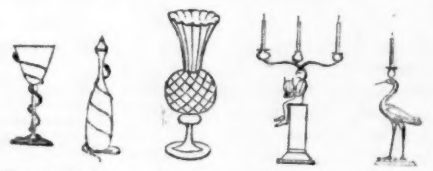

Fig. 4. Fig. 5. Fig. 6. Fig. 7. Fig. 8.

unbirdly office of holding a light or a cornucopia in his beak for the same purpose, as if to add another inconsistency, and to show how little one part has any connection with the rest (fig. 8). These faults are frequently made worse by the same use of two different substances already noticed.

Even in copying from good designs, and in the selection of others of uncertain merit, the feelings and proportions of the former, and the excellence or the defects of the latter, are not always understood; and we often see blunders such as these, where the basin is altered into a size too small for the ewer (fig. 9); and the spout of

Fig. 9. Fig. 10. Fig. 11.

the classical *prochous* is immoderately thrust up (fig. 10), while another is spoilt by the lip being abruptly cut off (fig. 11).

Arts of design have a totally different office, and are guided by very different principles from arts of imitation. The former must be inventive, and independent of *direct imitation* of nature, from which the *idea* alone should be taken; and this is the more to be urged at the present moment, as some still maintain that natural objects should be chiefly selected for decorative art, and that workmen should be furnished with casts from real leaves, &c. in order that they may *imitate* them in architectural mouldings and ornamental work,—an error, as I have already shown, not committed by the Greeks and others most remarkable for good taste.

This ornamental work is of course distinct from subjects adapted to the higher branches of sculpture and bas-relief.

But while insisting on the false principles of direct imitation for architectural designs, I admit of certain exceptions to this as to every rule; deviations from which must depend on the discrimination of a talented artist. Thus the rope moulding, so admired on the tower of Belem and other buildings, and a mixture of natural objects in certain kinds of mural decoration (as on walls and ceilings of Italian and Pompeian rooms), are allowable, provided they are subservient to—and the accessories, not the staple, of—the general ornamentation.

A glaring inappropriateness of subjects to particular materials and to particular places, is observable in the silver ornaments of our dinner tables and their plateaus. Here, in our massive and costly centres, and other pieces of decorative plate, instead of figures gracefully grouped to form a subject worthy of the material, or some composition showing a feeling for ideal beauty, are the horses of Mamelukes and knights, palm-trees, dogs, or other imitations of common-place objects from real life, proclaiming the usual want of invention, and being thoroughly unmeaning and out of place. As no effort of genius led to the design, so no idea of taste is connected with them; they are more or less like the reality, but suggest no talent beyond the skill of the copyist and of the workman; and as the "*faber incertus*" is guided by chance in his selection from the menagerie, a horse may come forth, or an elephant, according to his momentary caprice. Reason, taste, and ideal beauty have no part in such a selection; and where a more extended work is required, a number of parts are generally put together to complete the required dimensions, without combination or a "motive." Again, when figures of men are introduced in several compartments, they are frequently of various sizes, and characters, in different stages, totally unconnected with any *general design*; and when classical drapery is imitated, it is not the figure wearing it, but the drapery, that is designed, which, too, is thrown by a gale of wind into fluttering folds, and has all the mannerism and extravagance of the worst Cinque-cento style. Or if an effort is made at composition, the fanciful is generally substituted for the ideal; and its deformity is increased by overwrought ornament and crowded details.*

Gardner Wilkinson.

ON THE INFLUENCE OF SOME EXTERNAL AGENTS ON THE DURABILITY OF BUILDING MATERIALS.†

The action of the atmosphere upon metals is even more complicated than that which takes place upon stones, because the electro-chemical changes are more efficient, and the metallic bases are susceptible of combining with a greater number of gases than the earthy bases or the metalloids. In building operations the metals commonly used are iron, lead, copper, tin, zinc, with the mixed metals, brass or bronze, and to them we will confine our attention.

Iron, whether cast or wrought, becomes rusted on exposure to the air or water under certain conditions; that is to say, the outer portions of the metal are converted into a hydrous oxide, and can be detached in scales, or flakes. Many systems have been proposed to obviate the danger, and many substances applied to correct the evil arising from this cause, full information concerning which is contained in Mr. Robert Mallet's papers in the "Transactions of the British Association for the Advancement of Science." His experiments appear to show that gas tar applied hot is the most efficacious for iron work exposed to cold water; and that a coating of caoutchouc varnish resists the longest in hot water; but that neither of them can be considered a durable defence. Cases cited by M. Vicat are within the knowledge of every architect who has examined this class of phenomena, which prove that in some waters, as in some positions in the open air, iron work, totally unprotected, will last an indefinite period. These exceptions are, nevertheless, so rare, and the destruction of iron unprotected is generally so rapid, both in air and in water, that constant care and attention are required to guard against the destructive tendencies of these agents. If iron work be exposed to the air in positions which render the renewal of the latter difficult, and at the same time retain it in a marked degree of dryness, the iron will become covered with a coat of rust, through which the atmosphere cannot penetrate to attack the metal beneath. If the water in which iron is immersed contains a very small portion of some of the earthy salts, the decomposition will take place slowly. But it is necessary to observe that these remarks only apply to iron of considerable dimensions: small wires decay rapidly on exposure to either of these causes of disintegration.

Should iron, however, be exposed to confined air in damp positions, the decay attains its maximum. Carbonic acid gas contributes much to this, for, under its influence, iron passes (to use the words of Vicat), into the state of the carbonate of protoxide, which, absorbing fresh doses of oxygen, transforms itself into a hydrated peroxide. It is indeed generally considered that oxidation cannot take place to a dangerous extent unless carbonic acid be present; and it is precisely for this reason that iron, bedded in fresh masonry or concrete, resists the action of the air, because either the mortar absorbs the carbonic gas, which has a greater affinity for lime than it has for iron, or the masonry is sufficiently dense to protect the iron from con-

* To be continued. † See p. 390, *ante*.

tact with the atmosphere. The investigations of the Commission in 1850, respecting the fall of the bridge over the Maine, at Angers (recorded in "les Annales des Ponts et Chaussées," vol. 29, 2nd series, page 394), appear to prove that the preservative action of the lime depends upon its being in immediate contact with the iron, and that if a space, however small, be left between the two substances, moisture will insinuate itself, and in course of time produce active oxidation. M. Vicat, in a note inserted in the "Annales des Ponts et Chaussées" for May and June, 1853, appears to doubt the correctness of this conclusion, but even he admits that the preservative action of the lime depends upon its absorption of carbonic acid gas, and that directly its hardening ceases, it loses its power of resisting the action of the atmosphere on the iron.

M. Payen found that the addition of very small quantities of the sub-carbonate of potassa, or of sodium, to pure water, was sufficient to render it innocuous either to cast or wrought iron, and the same property existed in nearly all alkaline solutions; whilst, on the contrary, the addition of a small quantity of the chloride of sodium rendered the process of oxidation much more rapid than it usually is in pure water. It appears that grey cast-iron is more susceptible of destruction by oxidation than either wrought iron, or white cast iron; and that wrought iron resists the action of sea water more effectually than cast. It is a peculiar fact connected with this subject, that iron exposed to frequent displacements, shocks, or vibrations, is less affected by oxidation than when it remains constantly in one place, without disturbance. Thus, anchors in constant use are less exposed to rust than those preserved in the magazine: the rails of the main-lines of railroads are less corroded than those in the sidings: iron steamers rust less when in active service than when in dock. But the positions in which iron decomposes with the greatest rapidity, are those where it is fixed, and alternately exposed to the air and immersed in sea water. Ammoniacal and sulphuric acid gas exercise very serious effects upon the durability of cast and wrought iron. It is important, therefore, to prevent their use either in urinals, roofs over gas-works, or the engine-sheds of railway stations. There appears also to be some danger in using iron in contact with sulphate of lime, or in fact under any circumstances where it is likely to take up sulphuric acid gas, for which it has great affinity.

The galvanization of iron, which, as generally practised, consists in forming a superficial coating upon the metal by immersing it in melted zinc, appears to constitute an efficient protection, so long as the iron is covered. The contact with the zinc brings the iron into an electro-negative state, and it is known that, so long as the latter prevails, there is little tendency on the part of the iron to combine with oxygen. From a series of experiments made at Brest between the years 1842 and 1851 (see note by M. Dehargne, "Annales des Ponts et Chaussées, 1851"), it appears that the zincing process does not, in any sensible degree, affect the tenacity or the ductility of the iron; but it is important to secure the protected metal from any shocks, or friction, likely to remove the surface.

Zinc, when exposed to the atmosphere in its ordinary state, becomes rapidly covered by a whitish efflorescence, which adheres to the metal, and forms, as it were, a species of varnish, capable of arresting any further decay. This efflorescence is considered to be a carbonate of zinc; but if the atmosphere should contain any sulphuric or hydro-chloric acid (as in London and in the immediate neighbourhood of the sea), compounds are formed of a nature to compromise the solidity of the metal. In the purer atmosphere of Paris, and other continental towns, where wood is the ordinary fuel, and to which the sea air does not reach, zinc is employed successfully for roofing purposes: in London and on the sea-shore, its durability is very limited; and at all times its combustibility must be a serious objection to its use externally, especially for roofs.

Copper resists the action of the atmosphere very successfully, and the presence of some of the gases mentioned above does not seem to affect it in any material degree. A film of oxide, or carbonate of copper, is rapidly formed over the surface, and secures the metal from further decay. It is found, however, that a mixed metal or bronze, made of copper and zinc, resists the influence of the atmosphere, and sea water, more successfully than pure copper alone.

Lead undergoes little change upon exposure either to air or water, especially when the latter contains small proportions of the salts of lime. According to Brande, when lead is kept in distilled water, to which air has access, small crystalline scales of oxide of lead are formed, a portion of which dissolves in the water, and is again slowly precipitated in the form of a carbonate. Soft water also, or that without the salts of lime, appears to be more likely to attack lead than that containing lime. The use of lead for cisterns must, therefore, be regulated by the nature of the water to be preserved in them: for all roofing or analagous purposes, there do not appear to exist any philosophical reasons to object to the use of this metal, or to limit its application to any particular districts.

A very important remark with respect to the use of metals must be made; viz. that when two of them are used in contact in positions where moisture, in any form, has access to them, a species of galvanic action is established, which causes them to decay with great rapidity. Illustrations of this may be observed in iron railings, when the bars are secured to the stone curb with lead, and the decay is most evident when the iron is of the best and most malleable description. A similar phenomenon may also be observed when copper, or bronze, is in contact with iron in sea water: though the iron decays rapidly, it appears to exercise a protective influence upon the copper.

The laws of electricity, developed by the contact of two metals with a liquid containing a solution of an alkaline salt, are treated at some length in Vol. 1, "Gmelin's Hand-book of Chemistry," p. 364. From this authority it appears that zinc, tin, and iron, protect copper in sea water. Zinc protects iron and tin plate, but it is not so effective for the defence of iron in sea water if air be present, and it is itself rapidly corroded when used with iron in the sea. In that element tinned iron decays unequally, the iron oxidating whilst the tin remains intact; and it appears that the decay, superinduced by the contact with tin, is greater than that resulting from the contact with copper. The corrosion of copper may be considerably retarded by fastening to it at several points pieces of cast or wrought iron, or of zinc, when sulphureted hydrogen is likely to be present. Water containing bicarbonate of lime will deposit the lime if placed in contact with zinc and copper, the deposit taking place upon the copper; and when water of this description flows through leaden pipes, the carbonate of lime is deposited at the solder joints (composed of an alloy of tin and lead), on the brass cocks, and on any piece of iron or silver which may be introduced. The inconvenience arising from the stoppage thus produced may be obviated by the use of a lateral pipe fitted to the main at intervals, and furnished with plugs of a metal likely to deposit the calcareous matter, which can thus be withdrawn from the main.

The class of atmospheric influences included under the term medial action in the early part of this paper acts more powerfully upon some of the metals than on other building materials. Thus the tenacity of the former increases or diminishes with the temperature, and the electrical state of the atmosphere frequently modifies their powers of resistance. The most elaborate observations which have been made on this subject have been exclusively connected with the changes superinduced in iron, perhaps on account of its more general employment. They are to be found in Mr. Fairbairn's Treatise on the Application of Cast and Wrought Iron, and in a communication by M. Wertheim to the Annales de Chimie et Physique (3rd series, Vol. 12), from both of which it appears that the co-efficient of resistance of the metal diminishes with an increase of temperature in a more rapid proportion than the dilatation. Below and near the freezing-point cast iron becomes exceedingly brittle, but between about 40° and about 120° Fahrenheit there does not appear to be much change in its elastic powers. The lineal dilatation of metals, and indeed of all building materials, requires to be carefully attended to in all constructions. Very useful tables upon the subject are to be found in Weale's Engineers' and Contractors' Pocket-book for 1854, and in the Annuaire du Bureau des Longitudes.

Glass under certain circumstances is affected by the action of the atmosphere, for the potash and soda employed in its manufacture are susceptible of being decomposed and removed by the moisture, or the gases contained in it; and according to Gmelin the decomposition takes place with greater ease in proportion as the glass is richer in the above-named alkalies, and the temperature of the moisture of water is higher. Glass in which there is a deficiency of silica is exposed to this description of decay, which may often be distinctly perceived in window glass, the alkali from which is gradually attracted ("Knapp's Applied Chemistry," vol. 2, p. 8) by atmospheric moisture and washed away, whilst a thin layer of silica or silicate of lime remains upon the surface and exhibits a play of prismatic colours. An analagous decomposition takes place in the glass used in stables in consequence of the ammoniacal gases; and, according to Knapp, glass containing oxide of lead is liable to blacken on exposure to air impregnated with sulphuretted hydrogen.

The chemical changes produced in oleaginous and metallic pigments by the gases contained in the atmosphere are subjects of the highest importance to the decorative artist, but as the examination of them would extend this paper too far beyond the usual limits, I must refer the architect who would investigate them to the researches of M. Chevreul in the Mémoires de l'Académie des Sciences, 1850 (vol. 22). I may, however, state that M. Chevreul attributes the solidification of paints to the oils they contain absorbing oxygen from the atmosphere, and states that the driers act by facilitating the power of absorption. The various substances introduced to communicate colour appear to affect the rate of absorption; and the surfaces upon which the paints are applied have an influence independent of their mere capacity of taking up moisture. The varieties in the rates of drying upon the several woods and metals, experimented upon by M. Chevreul, indicate some peculiar differences in this respect, which have not hitherto been sufficiently examined.

G. R. BURNELL.

CHURCH-BUILDING NEWS.

Ripon.—The Cathedral east window is now placed. The cathedral is thrown open to the public from 1st to 15th August, between 11 and 6 each day.

Naburn.—On Thursday in last week, a new church was opened and consecrated at Naburn, near York. The entire cost of the church is about 2,400*l.* obtained chiefly by subscriptions, but there still remains a deficiency of nearly 200*l.*

Lincoln.—On Thursday in last week also, the foundation-stone of the new church about to be erected in the parish of St. Michael-on-the-Mount, Lincoln, was laid by the Earl of Harrowby. The church, when finished, will consist of a nave with ritual chancel, having an apsidal termination, a transept on south side, and a triforium, caused by variation of levels on the north side. The church will have a south-west porch, constructed for a future tower. It will be lighted at the west end by a five-light window, and by double-light windows on the north and south, except the transept, which will have a four-light window. The ritual chancel will be elevated above the nave, and divided by a low breast wall, and on the south from the transept by an open screenwork of wood — the arcading of the triforium being trefoliated upon shafts of polished Lincoln stone. A small belfry will surmount the sanctury arch. The building, it is said, has been designed with regard to its proximity to the cathedral below which it stands. Mr. S. S. Teulon is the architect, and the building is entrusted to Mr. C. Ward, of Lincoln, builder. About 1,800*l.* have been

raised towards the cost — the Governors of Christ's Hospital contributing 300*l.* besides proposing to place a stained glass window at the east end of the church.

Halstead (Essex).—A new vicarage-house has just been erected here for the Rev. D. Fraser, at a cost of 1,200*l.* Mr. William White, of London, was the architect, and Mr. Woollard, of Essex, was the builder.

W tford.—The external walls of St. Andrew's Church here, are nearly completed. There is still a deficit of about 600*l.* in the sum required to complete the works. The contract with Messrs. Fassnidge amounts to 2,400*l.* of which 1,500*l.* are due when the external walls are completed. To put on the roof requires a further sum of 350*l.* Mr. Teulon is the architect of this building.

Chalfont St. Peter.—On 21st ult. the Bishop of Oxford consecrated the parish church of Chalfont St. Peter, Bucks. The chancel of the ancient church had been re-built, and a new south aisle added, and the church otherwise enlarged and re-modelled. The work has been executed under Mr. Street, of Oxford, the diocesan architect.

Newport.—St. Thomas's Church, says last week's *Hampshire Advertiser,* will in a few days be rased to the ground. The work of demolition had already begun.

Warwick. — The foundation-stone of All Saints' Church, at Emscote, was laid by the Countess of Warwick on Tuesday in week before last. Mr. Murray is the architect.

Coalbrookdale.—The new church of the Holy Trinity was consecrated on Tuesday in last week by the Bishop of Hereford. The church is in the Decorated style of fourteenth century, and consists of nave and side aisles, with chancel and chancel aisle. The interior dimensions are 106 feet by 44 feet, and the church has accommodation for 420 adults and 108 children. It has an open timbered roof, with principals resting on carved stone corbels. The seats have oak bench-ends, made by the London Patent Carving Company. The window at east end of chancel, and the window in chancel aisle, are glazed with Powell's patent embossed quarries; and one of the windows in south aisle is filled up with some foreign stained glass. The font, of Caen stone, is placed at the west end of south aisle. The edifice is provided with an organ, by Walker, of London, the gift of a lady, and cost about 500 guineas: it is enclosed in an oak carved case, and illuminated by Willement, of London. The building will be heated with warm water, and lighted with gas. The tower is erected at the south-west angle of the church. The architects are Messrs. Reeves and Butcher, of London. The site for this structure and for the burial-ground is the gift of Miss Adelaide Anna Darby, and the building has been erected and endowed by Mr. Abraham Darby.

Chester.—The Church of St. John the Baptist and the Blue Coat Hospital in Chester was re-opened for Divine service on Sunday in last week, after a lapse of nearly thirteen months, occupied in the repair and restoration of the exterior and the re-arrangement of the interior. The pews have been replaced by open seats or stalls, mostly free. The tables containing the Decalogue have been restored to the east end, whence they were removed about fifteen years ago; and over them is placed an ornamental window, containing in the centre a figure of St. John the Baptist preaching in the Wilderness. In a panel above is placed a figure of a lamb bearing the banner of the cross, and in the margin on either side is a running branch of the vine, interspersed with ears of corn, emblematical of the bread and wine. The ornamentation of the window has been executed by Mr. S. Brown, of Chester. The whole of the work of the interior has been stained and varnished in imitation of oak by Mr. Tasker, also of this city.

Sale Moor (Manchester).—The church of St. Anne, Sale Moor, was opened on 14th ult. The church, which is built on a site presented with a donation of 500*l.* by Mr. Samuel Brookes, of Manchester, is in the decorated style of fourteenth century. The tower is at the north-west angle of nave, and is three stages high. In the basement is the principal entrance, beneath a bold canopied doorway; above this a two-light window, with tracery. At the corners of the tower are angle buttresses, over which, supported by gargoyles, are crocketed pinnacles, terminating in finials, the summits of which are 70 feet above the ground line. The parapet is composed of open tracery. Surmounting the tower is a spire, 60 feet high. At the east end is a five-light window; at the west-end, one of four lights; the side windows two and three lights alternately: the transepts have three-light windows, the whole filled with tracery. The buttresses are in two stages, the whole being built of stone. The extreme length of the building is 100 feet, and across the transepts 60 feet. Part of the roof is open timbered, the intersection of nave, chancel, and transepts having a groined ceiling, in imitation of stone arching. The edifice has been completed from the designs and under the superintendence of Mr. W. Hayley, of Manchester, architect. The cost, including endowments and fittings, is 4,200*l.* nearly all raised by voluntary contributions, chiefly from the neighbourhood. The building contains nearly 600 sittings, one-third free. A marble font has been presented to the church by Mr. Earl, and a stained window for the vestry by Mr. Hurlbutt.

Pennington, Leigh. — Pennington Church, Leigh, near Manchester, was consecrated a few weeks back by the Bishop of Manchester. This church originated with the dissatisfied parishioners of the vicar of Leigh. The minister of Astley collected 1,000*l.* the largest subscription only amounting to 2s. 6d. and the lowest to 1½d. the greatest number being in single shillings. The church is built of Yorkshire stone, and is in the Perpendicular style. It consists of nave and side aisles, with clerestory supported by six arches on each side. The church is 70 feet by 50 feet. The chancel is 33 feet by 20 feet, with an open-timbered roof, stained and varnished. There is a tower that will hold eight bells. The principal entrances are by the tower and south porch. The edifice was built from the designs of Mr. E. H. Shellard, of Manchester, by Mr. Mark Fogget, of Manchester, the contractor; and the work was superintended by Mr. Samuel Drinkwater, as clerk of works. The building seats 800, partly free. There remains to be erected a parsonage-house and schools, for which funds are yet to be collected.

Shotton.—The church at Shotton, in the county of Durham, was consecrated on 11th ult. The new edifice will be a chapel of ease to the parish of Easington. The church, which is from a design by Mr. P. Hardwick, is in the Early English style. Mr. Thomas Punshon, of Durham, was the builder.

THE VICTORIA LONDON DOCKS.—A SKETCH OF THEIR PROGRESS.

So enormous has now become the extent of London, that works of the greatest magnitude are carried on almost unknown, except to those dwelling in the particular neighbourhood; and as the spot on which the Victoria Docks are situated is a place scarcely inhabited even now, few of the people of London know that this great work has been commenced, and fewer still that the largest dock in the world will be open for reception of shipping early next year.

The engraving shows the present appearance of the works, although it is difficult, in one picture, to give a true idea of the extent. The plinths of pillars, &c. which stand up from the excavated space are intended for warehouses and quays. There will be four of these large warehouses. They will be three stories in height above the water.

The Victoria Docks are situated on the northern bank of the Thames, on an open tract of land extending from Bow-creek to Galleon's-reach, known as the Plaistow-marshes, and will have ready access to the heart of the City, and be placed in direct communication with all the great railways in the kingdom.

The works, which are authorised by the act of Parliament, are a wet dock and a tidal basin on the western side, with an entrance from the river a little below Bow-creek, as well as a canal on the eastern side of this dock, with proper basins and gates, to form another entrance from the Thames at Galleon's-reach. It is intended to confine the undertaking, for the present, to the formation of the western dock and tidal basin, and to the purchase of the land which will be necessary for the formation of the canal and other extensions at some future time.

The western dock and tidal basin will afford, together, an area of water accommodation of 90 acres, and upwards of a mile of quay and wharfage room, together with 160,000 feet of fire-proof warehouses, adapted for the reception of every description of merchandise. The landing jetties and warehouses will be fitted with rails communicating with the main line of railway, so that goods may be taken from the ship to all parts of the kingdom, without the delays, waste, and cost attendant upon housing and unhousing, and repeated removals from one place to another.

The dock shown in the engraving, only one of those which are proposed, is formed by the excavation of upwards of 2,000,000 cubic yards in quantity. It is 311 feet long, and 8 feet in width, with 10 feet of water at Trinity low-water level. The quantity of land purchased for the whole undertaking is 200 acres, at a price of 425,000*l.*

A short time ago the site of the Victoria Docks was a lonely and solitary place; and it is curious to consider that the embankment of the Thames, which forms the background of the picture, is of very remote antiquity. In the course of the works, various ancient British and Roman coins have been discovered, some Roman urns, a circular shield of tin, bones of deer and some other animals. The ground, which has been excavated, consists of the deposit of the Thames, which, like a huge lake or sea, formerly covered all the now green marshes of Essex. At a depth of 15 feet below high-water mark, a layer of peat, 7 feet in thickness, is met with: below that (in all 22 feet) is gravel.

The dock shown in the engraving will contain about 90 acres of water, and will, from the peculiarity of its position, cost less, it is said, than any at present formed.

	Capital.	Area of Water Accommodation.	Cost per Acre.
	£	Acres.	£
St. Katherine's	2,152,800	11	195,640
London Docks	3,938,310	28	140,654
East and West India Docks, including Canal and Pond	2,003,000	112	17,884
Proposed Victoria Docks, estimate for Works and Land, to be occupied therewith	450,000	90	5,000

It is surprising to consider the immense increase of commerce of London, which, like the population, is growing at a compound rate of multiplication. In the five years, 1823 to 1827, both inclusive, the average number and tonnage of British and foreign vessels and of colliers and coasters which entered the port of London was—

From beyond sea, 5,006 vessels = 917,087 tons.
Colliers and coasters, 18,913 vessels = 2,304,528 tons.

And in the five years, 1847 to 1851, both inclusive, there were—

From beyond sea, 9,839 vessels = 1,943,348 tons.
Colliers and coasters, 21,679 vessels = 3,154,136 tons.

In 1851, the number of British and foreign steamers which entered the port of London (exclusive of steam-tugs and pleasure and passenger steamers) was 2,641, with a tonnage of 717,969 tons.

Since 1849 the importation of animal food into the Thames has largely increased the numbers.

The company is empowered by the Act of Parliament to provide pasture accommodation for the large quantities of Scotch and foreign cattle which are now brought for the supply of the metropolis, and which, arriving in an exhausted and deteriorated condition, are driven to market without the rest and refreshment necessary for their recovery.

The basin will be formed partly of brick and partly of concrete and stone. Mr. Bidder is the engineer, and Messrs. Peto, Betts, and Brassey are the contractors.

PROGRESS OF THE VICTORIA LONDON DOCKS.

PROVINCIAL NEWS.

Oxford.—It was stated some time ago, that it was in contemplation to rebuild the chapel, library, and rector's lodgings at Exeter College. Plans for this purpose, says *Jackson's Journal*, have been submitted by Mr. Scott, the architect, and have met with general approval. The chapel will be rebuilt on its present site, but extended eastward over a part of the ground now occupied by the rector's house. A new and enlarged quadrangle will take the place of the small court known as St. Helen's, two sides of which will be occupied by the new library. Some additional buildings will also be erected in Broad-street, where the poplars now stand. It is intended to commence operations shortly, but the whole work will be extended over a space of at least two years.——Considerable improvements have been effected at the Radcliffe Library, with a view to make it more useful, and better adapted for literary and scientific meetings. Gas has just been laid on, and the building will be illumined by fourteen lamps, arranged in various parts of the upper gallery, a number placed on the reading-tables below, and a branch light in the centre. The building, which was formerly heated by gas stoves, is now heated by hot water, the apparatus for which has just been completed. These improvements are mainly owing to the present librarian, Dr. Acland. The whole of the heating and lighting apparatus has been entrusted by the trustees, under the advice of Mr. G. Gutch, their architect and surveyor, to Mr. J. H. Monks, of London, by whom the bronze gas pillars ranged round the library were manufactured.——On a recent occasion the directors, and Mr. Gardiner, the builder, of the new Crescent on the Park Town Estate, on the Summertown-road, entertained all the workmen, about 130 in number, who have been employed on that large undertaking, which is now nearly brought to completion. The architect is Mr. S. L. Seckham.

Sandon.—In June, 1848, it may be remembered, Sandon Hall, the residence of the Earl of Harrowby, was almost entirely destroyed by an accidental fire. The new building is rapidly nearing to completion. The site of the present edifice is the same as that of the former mansion. The building is of the style of James I. and is erected after the designs of Mr. William Burn, of London. It is built wholly of freestone quarried in the park. It has two principal fronts, the northern facing the ancient church of the parish of Sandon; the latter commanding an extensive view of the valley of the Trent. The offices lie to the west, and also occupy the basement story. The south façade exhibits the whole length of the building, extending 220 feet. The windows are surmounted with rich scrolls, bearing the initials of various members of the Harrowby family. A cornice, surmounted by a balustrade, runs along this front, and a number of light pinnacles spring from it. The chimneys are of stone, and ornamental, some being spiral, with mouldings and caps. The north front is far more varied in character than the opposite one. In the centre a large porch projects, supported by pillars, ornamented in accordance with the style of the building. A cornice, with an open balustrade, surmounts the porch, in the centre of which the arms of the Harrowby family are carved. At the angles of this porch square turrets rise to the parapet of the building, above which they are octagonal. They are covered by ogee roofs, surmounted by gilded vanes. The entrance porch opens into a saloon, to the right of which is the grand staircase, and to the left the billiard-room. This front is approached by a carriage drive through the park. The first stone of the new mansion was laid by Viscount Sandon on the occasion of his attaining his majority, January 16th, 1852. The clerk of the works is Mr. M'Leish, and the contractors are Mr. Parker, who has executed the masonry, Messrs. Jas. Paton and Sons, who have done the wood work, and Mr. James Annan, the contractor for the plastering.

Huntingdon.—The Hunts County Hospital has been completed and opened. It stands on an eminence on the northern side of the town. The entrance-hall, in the centre of the building, faces the north: the principal front is to the south; the females' entrance at the west, and the men's at the east. The building has the shape of a parallelogram, the entrance-hall forming a central pediment. The style of architecture is Roman, of or about the period of Palladian. The building was begun on 28th of May, 1853. The architect was Mr. T. Smith, of London; and the builder was Mr. Bird, of Huntingdon. The hospital contains four wards; two of ten beds each, and two of four beds each. The length of the building is 104 feet; height, 34 feet to cornice; and width, 72 feet. The cost was about 5,000*l.*; and the subscriptions raised were between 8,000*l.* and 10,000*l.*

Nottingham.—The plans, &c. for the new Nottingham Government School of Practical Art, for which a site has been secured on the angular elevation of Waverley-street and Peel-street, adjoining the north-western lodge of the Arboretum, are now being exhibited at Nottingham. The ground plan exhibits a front colonnade and vestibule entering on a square central hall, surmounted by central ceiling, and lighted by dome lights in the angular spaces. The great hall is flanked by two oblong apartments for museum and library. Behind it are smaller gallery stores, and in the rear of all a rotunda, with a central circular ceiling light.

Wolverhampton.—The formal opening of the new building for the Wolverhampton School of Practical Art was to take place on Tuesday, in presence of Lord Granville. The building, which has been erected from the designs of Mr. Edward Banks, of Wolverhampton, architect, is situate in Darlington-street, near the centre of the town. The style is Grecian. The exterior design consists of the principal façade towards Darlington-street, having projecting wings at each end, and the entrance façade in a new street leading from Darlington-street to Salop-street. The architectural features of these elevations consist principally of a rusticated basement and Corinthian pillars, surmounted by a cornice, the door and windows having characteristic dressings. In the Darlington-street front there are several panels of stone, which are intended to be sculptured at some future time. The basements, pilasters, cornices, and window dressings are of Bath stone, and the walls of white brick. The interior design consists of a basement, with house for the assistant secretary, and cellars to be let off; a ground-floor story, with committee-room, master's room, and large elementary and modelling rooms, and a one-pair, or upper floor, with library, painting room, and large antique room, lighted by skylights.——The Wolverhampton Baths, erected by a company of shareholders, having been found unremunerative, have been sold, with 1,350 square yards of building land adjoining, for 1,700*l.* to the town clerk, for himself and others, by whom the baths will be continued to the use of the public. It is said to be the wish of the company to construct on the adjoining piece of ground an open bath, applicable to the requirements of the working classes. The property cost the original shareholders 4,000*l.*

Merthyr.—The surveyor newly appointed by the local Board of Health is to have a salary of 250*l.* a year. There were thirty-two applicants, out of whom five were selected, who attended at a meeting of the board, when the decision was unanimously made in favour of Mr. Henry.

Liverpool.—A new gas company is about to be established here to supply the borough with gas at 3s. 6d. a thousand cubic feet, while yielding a profit of 10 per cent. and with a promised reduction of price to 3s. as soon as the profits exceed 10 per cent. The Legislature bound the old (amalgamated) company to reduce their price in a somewhat similar way, but for years they have managed to evade the law by expending their extra profits beyond 10 per cent. as additional capital in laying miles of pipes beyond the borough boundaries, so as to afford a pretext for reaping their 10 per cent. on the whole of this comparatively waste capital, as well as on the nominal amount of their original shares, and thus the public have been deprived of the advantages designed by the Legislature to be reaped by them and not by the shareholders. We advise the people of Liverpool to make it a *sine quâ non* that there shall be no more amalgamations, which work wonderfully well for the public advantage *theoretically* speaking, while all the practical benefit goes into the pockets of the amalgamators. Not only do the new company propose to reduce the price of gas, but what is still more essential in the present instance, to improve its quality. The old company regularly reap their 10 per cent. or highest legal profits on an exaggerated amount of capital, nevertheless they supply an article which is perpetually complained of for its badness as well as for the unworthy means whereby its price is upheld beyond the intention of the law as laid down in its charter of incorporation.

Preston.—At the last half-yearly meeting of the Preston Waterworks Company, prior to the works passing into the hands of the local Board of Health, a dividend was declared of 3*l.* 10s. per share—equal to 14 per cent. per annum. The previous half-year's dividend was 3*l.* 7s. 6d. The proprietors, according to the local *Chronicle*, will receive out of the purchase-money of the works about 116*l.* 10s. for each 50*l.* share, free of all payments. The entire working expenses, on the average of the last five years, were only 18 per cent. on the income. The company has between 13,000 and 14,000 customers, nine-tenths working class, occupying houses at 10*l.* a year and under, average charge for water, 8s.

Stockton-upon-Tees.—The *Gateshead Observer* remarks that fifty years ago, a ship-building yard at Stockton-upon-Tees was occupied at an annual rental of 30*l.*; and that part of it has recently been sold for iron ship-building at 4,000*l.*

Newcastle-upon-Tyne.—The foundation stone of the ragged schools of this town was laid by the mayor on Tuesday in last week, at Garth-heads, New-road. The new building, according to the local *Courant*, will be a plain unpretending structure of brick. It will contain boys' school-room, 53½ feet by 18½ feet; boys' work-room, 37 feet by 28½ feet; class-room, 19 feet 7 inches by 16 feet; girls' school-room, 53½ feet by 18½ feet; girls' work-room, 30½ feet by 28½ feet; store closets, each 10 feet 9 inches by 6 feet; two baths and wash-rooms, 18 feet by 6 feet; a committee-room, 15 feet by 11 feet. The building will be one story, except the master's house. This will contain three stories, the uppermost dormitories for the children. The builder is Mr. Gibson. The estimated cost of erection is about 2,500*l.* It is expected that the schools will be completed and ready for use about January next.

Shields.—Labourers are excavating for the foundation of the new Sailors' Home at North Shields. Mr. Elliot, the contractor, is erecting sheds for the stone dressing. The stonework for the foundation will be proceeded with immediately. The chief stone will be laid by the Duke of Northumberland some time in the spring of next year, and the whole, it is anticipated, will be completed in the latter part of 1855. The building will be erected under the inspection of Messrs. Green.

Edinburgh.—This city, it is said, is to have a new post-office, the present building not admitting of suitable extension.

Jersey.—At the St. Catherine's Bay works, according to a correspondent of the *Jersey Times*, much has been done during the last two years. The verclut or northern arm of the breakwater is nearly completed: the whole of the lower portion is finished; and the upper portion is completed to 1,500 feet from the inner angle, which is 100 feet from the main land. The promenade-walls are completed to 1,300 feet, and are within 200 feet of that distance filled in: the southern end of the breakwater, not yet completed, is proceeding rapidly, as are also the inside walls and quay. The outside walls have a curve of one in three, according to the plan of the late Mr. Wilkinson, who was Mr. Walker's engineer on the works when they were commenced. About six months will serve to complete this arm of the breakwater. The arm from the Archirondel Tower, without which the harbour would be worse than useless, has not been worked at since 1850. It would have to be carried out about 3,000 feet. 150 men only are now employed on the works: they are said to be picked men, however, and receive 3s. a-day.

BATHS AND WASH-HOUSES.

We have noted with interest, in a Return just now issued by the Committee for Promoting the Establishment of Baths and Wash-houses for the Labouring Classes, the gradual but increasing progress of the business of the baths and wash-houses in the London district, and we insert in this place a table of the numbers of the bathers and washers, and the receipts at nine establishments which are conducted under or in accordance with the Acts 9th and 10th Vict. c. 74, and 10th and 11th Vict. c. 61 :—

Period of the Year.	Bathers.	Receipts.	Washers.	Receipts.	Total Receipts.
1854.		£. s. d.		£. s. d.	£. s. d.
Lady-day Quarter	144,502	2,140 3 0	84,822	1,607 18 4	3,748 1 4
Midsummer ditto	318,967	4,325 14 10	69,171	1,204 13 0	5,530 7 10
Total	463,469	6,465 17 10	153,993	2,812 11 4	9,278 9 2
Same time last year	379,880	5,299 10 8	122,450	1,801 0 1	7,100 10 9
Showing an increase in six months in this year	83,589	1,166 7 2	31,543	1,011 11 3	2,177 18 5

In the enumeration of the business in the metropolis during the half-year ending on the 30th of June last, we must not omit to mention that the receipts at the George-street, Euston-square, and Lambeth establishments, which are not regulated by the public Acts, have amounted to the further sum of 1,847*l.* 1s. 3d. being the revenue derived from 83,278 bathers and 64,619 washers additional.

When it is borne in mind that in the year 1848 there were but two establishments open in the metropolis, and, moreover, that the income from the bathers and washers then amounted, *during twelve months*, to only 2,896*l.* 5s. 1d. it will at once be apparent that the large increase in the practice of bathing is owing, in a great measure, to the extension of the system. We think these results may be regarded with much satisfaction, and it affords us pleasure to learn likewise "that two establishments are now in course of erection in the important district of St. George's, Hanover-square; and also that the commissioners appointed by the ratepayers in Clerkenwell parish will proceed to build baths and wash-houses so soon as they can meet with a site of adequate dimensions in a suitable locality, and convenient of access for the inhabitants of that densely-crowded district."

Before concluding, we would venture to remark, that the material aids of health are cleanliness of person and apparel: no pains, no expense should be spared to preserve the life and health of the great mass of the people, the working poor.

KILKENNY ARCHÆOLOGICAL SOCIETY.

The July meeting of this society was held on the 5th inst. Mr. D. M'Evoy, Urlingford, presented a magnificent specimen of the antique bronze cauldrons which seem to be peculiar to Ireland. It was found on the 23rd May last, in cutting turf in the Bog of Allen, property of John Latouche, esq. The bottom piece of the vessel presents an admirable specimen of hammered work, forming in itself, without joint or seam, a perfect bowl, 6 feet 6 inches in its greatest circumference, and diminishing upwards to 6 feet. This remain of antiquity obviously must have been in the position in which it was found for very many centuries, as not only was it lighted upon at a depth of 7 feet from the surface, and at a distance of a quarter of a mile from the arable land forming the outside margin of the bog, but the surrounding peat had evidently never been disturbed.

Mr. Feehan presented an ancient cast-iron chimney-back, in size 1 foot 11 inches by 1 foot 3 inches. The margin was adorned with raised scroll-work and flower patterns, and it bore in the centre a bas-relief representing a thief unsuccessfully tempting with meat a dog which was guarding the doorway of a house. Above was the motto, "*Fides dona superat;*" and below the date 1656.

Mr. Graves took occasion to mention another instance of the good feeling fast growing up in the community with respect to the preservation of antiquities. The ornamental stone chimneys of the old house of the Roth family, commonly known as Wolf's Arch, having become dilapidated and dangerous, he had offered to have them repaired at the expense of the society, as he apprehended either that they would fall, or that the authorities would order them to be taken down as a nuisance to the public, which would seriously deface one of the finest of the Elizabethan houses remaining in Kilkenny, as had already been the case with regard to two of the old houses in High-street. Mr. Preston had, however, at once taken the expense on himself, declining to allow the necessary reparation to be a burthen to the society, and he had taken down and carefully re-erected the stonework of the chimneys, preserving strictly their ancient character.

Sir Erasmus D. Borrowes, bart. forwarded the following curious extract, with others, from the old Dublin newspaper termed *Pues Occurrences*, vol. 35, No. 8, January, 1737-8: "John Walsh, who keeps the Kilkenny stage-coach, gives notice, that he will set out from Dublin and Kilkenny precisely at seven o'clock in the morning, on every Monday and Thursday, during the summer, and run through in two days (accidents excepted). Twenty pound weight of luggage will be allowed to every person, and 1d. per pound to be paid for all weight over."

Mr. H. P. Clarke described a small stone sepulchral cist, discovered at Kilcreene, near Kilkenny, in May last. He said:—"As to the age of this tomb, which evidently belongs to the period when it was the custom to burn the dead, I understand this practice had totally disappeared about the eighth century, the practice having been expressly forbidden by Irish ecclesiastical canons about this period; so that we cannot, according to this view, assign to it a less antiquity than 1,000 years."

Papers were then read "On the Irish Pewter Coins of James II." by Aquilla Smith, M.D. M.R.I.A.; "On the Runic Crosses of the Isle of Man," by Mr. John Windele; &c.

IRISH BUILDING NEWS.

The Commissioners of National Education intend building a large District Model School at Belfast, at the junction of Ardmoulin-street and the Falls-road. The main buildings facing the Falls-road will have a frontage of 126 feet by a depth of about 120 feet, with boys', girls', and infants' playgrounds, and all requisite out-houses. Central, on the principal story, is an entrance-hall. A boys' school-room, 81 feet 10 inches by 30 feet, with pouch, cap, and class-room; and an infants' school-room, 60 feet by 30 feet, with cloak and bonnet-room in connection therewith, and staircase leading to girls' school, &c. Urinals, privies, and sheds, are provided in the playgrounds. The style of architecture is that which prevailed about the year 1600; the front elevation presenting a centre projection, 23 feet wide, with cut stone pilasters, terminated by finials, and a semi-circular oriel (with mullioned and transomed lights and characteristic tracery at top), corbelled over entrance doorway; the whole terminated by a gable with projecting finial. Mr. F. Darley is the architect.

The large railway hotel at Killarney has been opened. The plan is quadrangular, with projecting wings. The front is faced with granite from the county of Wicklow, procured at a considerable expense. An assembly-room, 80 feet by 20 feet, with ornamental ceiling, and retiring-rooms off same, also private apartments for small families, with, we believe, 130 bedrooms, are provided. The furniture is supplied by Messrs. Jones and Son, Dublin; the gas manufactured by the company, and ironmongery by Mr. Glenton, London. Mr. Darley is the architect. In the competition for this building instructions were issued by the company that the expenditure should not exceed 6,000*l.*; but we are credibly informed that 18,000*l.* is nearer the sum incurred in its erection. Messrs. Atkins and Brash, of Cork, were each presented with a 50*l.* premium.

New buildings have been lately completed in connection with the Kingstown railway terminus, but the style of the flank elevation at the harbour side (which consists of a series of projecting piers and a continuous frieze, with massive corbels, surmounted by a parapet), is stated to have an inharmonious effect with the classic style of the main building. Mr. Mulvany, was the architect.

COMPENSATION CASE.—PIMLICO IMPROVEMENTS.

THE COMMISSIONERS OF HER MAJESTY'S WORKS, AND THE TRUSTEES OF THE LATE RALPH WARD, ESQ.

On Friday, the 28th July, a jury was sworn before Francis Smedley, Esq. in his court, as High Bailiff of Westminster, to ascertain what damages would be sustained and what recompense should be made to the owners of certain property, situate in Charlotte-street, Stafford-row, and Stafford-place, Pimlico, required for improvements round Buckingham Palace.

The Attorney-General, the Solicitor-General, and Mr. Henry Willes, appeared for the commissioners; Sir Frederic Thesiger and Mr. Charles Pollock for the claimants. Messrs. Tooke, Hallowes, and Price, were the solicitors for the latter.

The property included the Gun Tavern, and various houses in Stafford-row.

Mr. Edward Roberts, Mr. C. Lee, Mr. Thos. Little, and Mr. George Godwin, were the witnesses called for the claimants; and their valuations were as under:—Mr. Roberts—23,075*l.* 16s.; and 25 per cent. for compulsory purchase, 5,768*l.* 19s. 0d. Mr. Lee—21,015*l.*; 15 per cent. for compulsory sale, 3,152*l.* Mr. Little—21,332*l.* 9s.; 20 per cent. for compulsory sale, 4,266*l.* Mr. Godwin—22,754*l.*; 15 per cent. for compulsory sale.

On the part of the commissioners, Mr. D. Norton gave evidence that he valued the property at 15,001*l.* which included 10 per cent. for compulsory sale. Mr. Tite said he valued it at 15,103*l.* making same allowance for compulsory sale. Mr. Shaw valued it at 15,293*l.*; Mr. Hardwick at 15,670*l.*; and Mr. Pennethorne, at 15,272*l.*

The jury retired for a short time, and then gave a verdict for 20,750*l.*

THE CRYSTAL PALACE.

What benefit will the country derive from the Crystal Palace? is a question often asked, and a question it may be well to answer. It will encourage taste. Before men have seen perfect works (if the word may be used) they are content with inferior ones: neither do they always perceive the essential points required in the imperfect work until they have seen the standard work, when the difference immediately strikes them. The Sydenham collection of architectural specimens, carefully selected by men of experience, will doubtless have a good effect in purifying the design of many of our future buildings. The mongrel edifices that are now-a-days erected in the shape of dwelling-houses around the metropolis are monuments of the want of taste and ill-judged design of the houses for the situations they are placed in. Styles should be suited to localities. A country villa does not look well in a large town; and some houses are more adapted for one situation than another. What can be more odious than our streets in the metropolis and suburbs, built some fifty years ago or more, as Baker and Harley streets, and the King's-road, Chelsea, the New-road, and others of this kind? The tendency of the age is towards improvement, and if the rising generation of architects and the public made the Crystal Palace their studio, we need not despair of being witnesses to works creditable alike to

the designers and to those who furnished them with the means of instruction. The encouragement of a better taste for architecture will not stop there—it will lead to general improvement. Who would leave a pretty house surrounded with a wilderness or dirty streets? The general effect would require consideration and improvement, each surrounding object contributing in some measure to the beauty or uniformity of the whole. It does not require much foresight to perceive how this subject branches off and connects itself with social improvement. The terraced gardens and park, with the engineering and mechanical contrivances, may also be regarded as conducing to the improvement of the taste of the people.

Lastly, it remains but to be hoped that the people will take advantage of what has been done for them by the Crystal Palace Company, and warmly give their support to an undertaking that has for its end their own improvement, remembering that should it fail, the historian will have it to record that the enlightened Englishmen of this generation neglected the means procured for them for increasing their knowledge of true art, to their own loss, and to the cost of their posterity. W. S.

THE TAILORS' BENEVOLENT INSTITUTION AT HAVERSTOCK-HILL.

THE chapel has been enlarged at the expense of one individual. Mr. C. Hayward, architect.

A new bay has been added to the nave, a new chancel and vestry, &c. built, while the interior of the roof has been remodelled.

A side arch in the chancel has spandrils enriched with the olive and vine, and the passion flower and wheat intertwined, with appropriate inscriptions, and is filled in with a screen of metal. The east window has some stained glass by Hedgeland, and represents passages in the life of St. John, the centre being that apostle at the foot of the cross. A memorial window is about to be added on the south side.

MONUMENTS.

A STATUE to the memory of the hero of Trafalgar and Aboukir has just been placed in the Market-place, Norwich. The sculptor is Mr. Milne, of London. The features are copied from a cast taken by Chantrey and a bust by Gahagan. The dress is a representation of that actually worn by Nelson at the moment when he received his death-wound on the deck of the *Victory*, and the statue is cut from a block of fine Sicilian marble. The statue is the first which has been placed in Norwich, and the committee under whose directions it has been erected have not evinced very great discretion in the selection of a site. Nelson is known as the Norfolk hero, and his statue deserved a prominent place in the capital of the county. This honour, however, has been denied it. The centre of the market-place is occupied by four gas-lamps, and these remain undisturbed, while the statue has been placed on a very inadequate pediment in the corner at which the Guildhall stands. The citizens generally are loud in their reprobation.——The Sheffield papers state that Mr. T. Milnes, of London, sculptor, is another candidate for the execution of the Montgomery monument. Mr. Milnes made a bust of the late poet in 1851. —— A monumental tablet, designed by Thornycroft, has been put up in Shifnall parish church, to the memory of a lady, the late Miss Smyth, of Rock-terrace. The monument is fixed against the east wall in the south transept of the church, and consists of a polished tablet of statuary marble, relieved by a Sicilian marble background. The tablet (which is of Grecian design) has a plinth and base with mouldings, and a cornice ornamented with a *guilloche* band and other enrichments, finished by a segmental arched pediment. Portions of the geometrical lines of the tablet are concealed by drapery, which falls in folds from the pediment to the base on each side. A votive wreath of lilies, sculptured in *alto relievo*, occupies the central or *fess* portion of the monument, and the artist has emblematized the rupture of earthly ties by the introduction of a full-blown flower torn from the parent stem.——A monument has been erected at Montrose to the memory of a late local celebrity, the Rev. Dr. Smith. The monument consists of a base, nearly 3 feet in height; die, 4 feet 8 inches; cope, 1 foot 2½ inches; and an urn, 3 feet; the total height being about 12 feet. It is formed of Aberdeen granite, and the sides of the die are polished. The work was executed by Mr. Donald, of Aberdeen, sculptor.

THE TRIM OF TRAINS IN TRANSIT.

ONE of the strongest reasons why railway guards should have a regular watchman's beat along a train in transit, so as to constitute them really guards or watchmen, we have again and again urged to be the fearful opportunity for the committal of numerous crimes, such as robbery, assaults, abuse of women, and even murder, afforded by the present system. Of such crimes we have had but too frequently occasion to adduce specific instances, as well as other and no less urgent reasons for the particular mode of obviating them on which we have so frequently insisted,—such as, for instance, the singular manifestations of insanity which have been found to be occasionally excited during railway transit—why, it may be difficult to explain, but unquestionable as a fact—independently of all additional risks from the presence of the previously insane; or again, as another instance of actual occurrence, where an engine with a train was flying onwards at the rate of fifty miles an hour without either driver or stoker to guide or stop its course, and when a guard had to scramble over all the carriage tops at the redoubled risk of his life to reach the engine. In all such cases, and in many others, nothing short of a safe and ready means of enabling the guard to pass along from carriage to carriage, and, indeed, nothing less than an established practice of so passing regularly along such a watchman's beat, will (in conjunction with a simple and practical system of signals) secure the public safety during railway transit. Even were it found prudent to allow every passenger the liberty of stopping the train by signalling the guard or driver, of what use would such a liberty be where a robber, a murderer, or other criminally-disposed persons or persons, with whom an unfortunate passenger was cooped up alone, had premeditated the committal of crime under circumstances so unprecedentedly favourable? Good care would be taken, in such cases, that no mere mechanical signal should reach the guard; and we know that even the loud screams of imperilled life are not to be depended on amid the rattle of running trains. The recent occurrence of a death struggle between two ferocious criminals and a policeman, who was nearly murdered in spite of his cries before the train stopped, as it did not do till it reached the usual station, has revived this important question, and startled the public into a consciousness of the necessity for providing against such not unfrequent contingencies. Earl Fitzhardinge has brought it before the House of Lords, and the *Spectator* and other papers before the public; but still all that is insisted on, except by ourselves, is a signalling system between passengers and guards or drivers. Such a system is certainly most desirable, and must be established: even *per se*, it would certainly be vastly better than no preventive means at all. But useful as the signalling system cannot but be, especially when established between guard and driver (and much as we have ourselves urged its adoption), still it is not sufficient, *per se*, as we have said, fully to secure the public safety: it requires as an essential adjunct the arrangement for the guards of some means of passing freely from one carriage to another, so as to enable them to know, and see, and judge for themselves what is going on in every carriage at any time they may choose to appear at its window. It will not do for us to be told that such an arrangement is not possible: it is not only possible, but practicable; and not only practicable, but has actually been adopted on American lines, and also on some Continental ones. On this account an American traveller intimates in the *Times*, that so perillous does he conceive the English system to be (by comparison with the American), that he never travels in an English railway carriage without having a loaded revolver in his pocket, for fear of madmen and escaped convicts!

It must have been the same conviction which induced Earl Fitzhardinge to say, in the House of Lords, last week, that "as matters now stood, the surest place in which a man could with impunity commit an offence of the greatest magnitude, such as murder, robbery, or violence to women, was a railway carriage;" and the same that induced the *Spectator* newspaper lately to remark that "of all places there is practically none so solitary for the purpose of the murderer as a railway-carriage. When once the train is in motion, he is absolutely protected against all interference; he may undisguisedly and frankly own his purpose, and the victim has only the choice of remaining at the disposal of his fellow passenger, or jumping out to destruction." It is to be earnestly hoped, then, that we shall not now have much further occasion to reiterate our oft-revived suggestion and warning, ere the only effectual means of prevention, namely, a regular watchman's beat along every train, be enforced by Parliament, whose own "commissioners," some years since, adopted that suggestion, and urged it as a special recommendation to railway companies, by whom it was treated with that silent contempt which was cast upon the signalling system itself till now that the public attention has been determinedly fixed upon it, and that, accordingly, railway directors begin to find that system perfectly practicable, although for many years they resisted its adoption.

Miscellanea.

OLDHAM LYCEUM AND INDUSTRIAL EXHIBITION.—The accommodation of the members of the Oldham Lyceum having been very inadequate, the Working Men's Hall in Horsedge-street, erected by the defunct Socialists, has been taken and adapted by enlargement to the purposes of the Lyceum, under the superintendence of Mr. Dittensor, a local architect. Two large additions have been made, so that now it is, what it was not before, a room sufficient for public meetings. The two additions are corrugated iron structures, put up by Messrs. E. T. Bellhouse and Co. of Manchester. One is 20 yards by 16 yards, occupied by machinery in motion, forming part of an industrial exhibition opened in it in connection with the Lyceum. The other measures 16 yards by 8 yards, and is fitted up as a baronial hall. The area covered by the main building is 30 yards by 20 yards, and for use as a meeting room the space has been largely increased by a deep gallery carried round three sides of the interior. It is lighted at night by the invention known as the "sun-light burner," and first described in the *Builder*, seven or eight years since, as an effective mode of lighting in imitation of sun light, emanating exclusively from the ceiling, but which appears to have been recently appropriated by a Liverpool gentleman as his own invention, although it had even been realised by its true inventor, "J. E. D." in a Scottish theatre some years before it was described by him in the *Builder*. The sun-light burner has since been found to be an excellent ventilator, and it is used in the Oldham Lyceum for this purpose also. The exhibition in the newly-appropriated building comprises numerous objects of industrial and art interest, and was inaugurated on Monday in last week by the Earl of Wilton, the corporate authorities of Oldham, the Bishop of Manchester, and others, who afterwards held a banquet, in the town-hall, of about 200 persons, including a large number of ladies.

ISLINGTON POOR-HOUSE COMPETITION.—It will, no doubt, seem strange to some of your readers when they see by an advertisement in your paper of July 22, that premiums have again been awarded for the Islington poor-house. We were instructed to make out working drawings, &c. and awarded the first premium twelve months ago, but we have now been obliged to put it into our lawyer's hands; so it will be unnecessary for us to make any further observations upon the matter until it shall come before the proper authority. We hope, after the various notices that have appeared in your valuable paper, you will be so kind as to notice this.—JONES & PARKER.

TELEGRAPHIC PROGRESS.—Intelligence has been received that the first portion of the great Mediterranean Submarine Telegraph has been successfully laid down, from Spezzia, in Piedmont, to Cape Corso, in Corsica, as well as the communication across the Straits of Bonifaccio, from Corsica to the island of Sardinia. It is also understood that the contractors, Messrs. Tupper and Carr, are nearly ready with the remainder, to connect Cape Spartivento, the southern point of Sardinia, with the African coast, where it will join the Algerian lines, and whence it is ultimately intended by the projector, Mr. Brett, that new lines be sent eastward through Egypt, with the view of approximating towards the East Indian telegraphic system.——The dividend declared at the last half-yearly meeting of the Electric Telegraph Company, appears to have been at the rate of 7 per cent. free from income-tax. It was stated that, notwithstanding a reduced tariff, the revenue shows an improvement, just as we anticipated while in vain urging the company to reduce their tariff, and so obviate the formation of new lines, which the company *now* express themselves ready enough to compete with *ad libitum*. The operations of the company are now identified with fourteen lines of railway, including the Crystal Palace, and nearly 3,700 miles of new wires are in course of completion. The Act granting the company limited liability now only awaits the royal assent. The reserved fund is stated at 61,033*l*.

REPORT ON METROPOLITAN BRIDGES.—The report of the Select Committee of the Commons on Metropolitan Bridges has been published. The reporters state that, except Blackfriars and Westminster, the whole of the bridges are in a durable condition. They report on the necessity for further means of communication across the river, and state that the sites proposed by Messrs. Tite, Page, McLean, Bennoch, and others, are,—Tower-hill, below London-bridge, St. Paul's, Charing-cross, and Horse-ferry-road. They recommend distinct rates to defray the cost of bridge accommodation.

St. Mary, in Romney Marsh.—The rector of this parish, the Rev. Henry Macharness, is striving to give his church something like propriety of appearance, by restoring the chancel, clearing away the whitewash from off the stonework, and repairing where needed. It is a very poor parish, however, with a population of not more than 100 souls, so that he gets little help. Some public-spirited Kentishman, or Man of Kent, seeing this notice, may perhaps be led to help him. At Dymchurch, where Mr. Macharness acts as curate, he is doing much good with quiet energy.

Royal Association for Promotion of the Fine Arts in Scotland.—The annual general meeting of this association was held on Saturday before last, in the Queen-street Hall, Edinburgh, which was filled on the occasion by a numerous assemblage of ladies and gentlemen. The prizes to be distributed among the subscribers were displayed behind and in front of the platform. The Dean of Faculty was called to the chair. He was accompanied to the platform by Lord Neaves, Colonel Cadell, Sir William Johnston, Professor Christison, James T. Gibson-Craig, Esq. and numerous other gentlemen of influence at Edinburgh. In course of his address the Dean of Faculty said that he considered such an institution as this to be well entitled to claim for itself the character of national; for although it was sometimes publicly said to be maintained for the benefit and encouragement of art, it had, in truth, a higher duty and a nobler end; and if it diffused benefits and encouraged artists, it was only in so far as they contributed to that end—only in so far as they might be regarded as the servants of the public—the instruments whose skill and excellences of all kinds were faithfully reflected in every successive stage of the improvement of the public taste. That there had been a great advance in the public taste in our day he thought few would be found to deny. He said so not merely because of the production of works of great merit in the arts of architecture, sculpture, and painting among ourselves, but rather because we see it sometimes in those matters of a much more homely kind,—in the internal decoration of our houses, in the arrangement of our gardens, and in the fashion, form, and materials of the most common implements and utensils of domestic life. Now, these he regarded as very precious symptoms indeed, because they indicated the presence of a taste which was no longer the mere frigid admiration of classical models, but which had a vital action and a pervading character. The report was adopted and the prizes were then ballotted for in the usual manner.

The British Contribution to the International Exhibition of 1855 at Paris.—The Treasury have sanctioned an estimate of 50,000*l.* as the sum required to be voted in the year ending 31st March, 1855, for expenses to be incurred in the management of the British department of the Universal Exhibition at Paris next year. A correspondence as to the details and mode of procedure has been held between the Department of Science and Art and the Treasury, and a sum of 3,000*l.* already voted to defray preliminary expenses.

Chimney Climbing.—At Churchbridge, Cheslyn Hay, on Wednesday week, a climber, named Chimney Tom, went up a stack 60 yards high, for the purpose of affixing a lightning conductor to the chimney. The plan adopted seems to have been much the same as that of Steeple Jack. A large square kite was made to carry a string over the top of the chimney, and by means of it other lines were hauled over it, until one of requisite strength was got over. To one end of this latter was attached a chain 20 feet long, which lay over the mouth of the chimney, and to the end of the chain was fixed a small single block, through which was reefed another line leading to the ground. To one point on this line was secured two 56 lbs. weights, which having been drawn up to the block, the other end was secured to the person, who by a very little exertion was in less than a minute run up to the chimney top, around which he walked with much ease and confidence. The chimney had been struck by lightning some time ago, and is now supplied with one of the improved lightning conductors manufactured by Messrs. Woodman and Lewis, of Manchester, who are said to have applied during the last few months upwards of 100 conductors to high chimney stacks, church spires, &c.

Roads.—Tenders for road-making and drainage upon the "Crystal Palace Park Estate," Norwood, the property of the "Englishman Freehold Land Society." Mr. Joseph Springbett, acting surveyor; Mr. R. J. Woodcock, consulting surveyor:—

Hayes	£3,340
Holledge (accepted)	2,250
Campbell	2,134
Cooke	1,912
Wood and Wheeler	1,892
Rogers	1,680
Gregory	1,150!

Destroying Bricks; with Brutal Assaults.—Two police-constables and another man having been set to watch a croft at Garden-lane, Manchester, about midnight they perceived a gang of men destroying the bricks. The officers and watchman immediately ran towards them, on which the men beat them with sticks, kicked them in the most violent manner, and stabbed one of them in the side. Several thousands of bricks were likewise destroyed. On several previous occasions bricks had been destroyed, and a reward of 10*l.* had been offered for the discovery of the perpetrators.

Iron and other Metals.—The puddlers *are* showing a determination to have a small share in the declared rise of price. They demand the modest enough sum of 1*s.* a ton out of the 20*s.* of increase which some have even maintained to be only one-half of the subsequent rise. The South Staffordshire puddlers threaten a strike, and the masters have met and resolved to resist their demand. One of the items of reason given by the masters is, "that considering the price at which manufactured and other iron can be bought in other districts, it is very doubtful how far the present prices of Staffordshire iron can be maintained!" One authority in the trade, while reporting this resolution, expresses the opinion that "it is to be regretted that some of the workpeople are so unwise as to threaten a course which may disturb the present steady position of the trade." Now, we think that if it be so "very doubtful" how far the rise so recently resolved upon can be maintained, it is indeed to be regretted that the masters of these workmen should have set them so pernicious an example, and have been themselves "so unwise" as to disturb the late "steady position of the trade." As it is, the puddlers are likely henceforth to hang as a wholesome dead-weight at the heels of the flying Pegasus which their masters ever and anon appear so prone to mount. It is hard indeed, however, that these will not allow their humble dependants to hang on by the tail. They even threaten to kick them out of all connection should they persist, for "the masters," we are informed, "have adopted measures to prevent the workmen gaining their object by taking the works in detail, so that if the workpeople are so ill-advised (as they have been by their masters' quarterly declaration of a rise in prices) as to persevere in their demands, it is to be feared the result will be a general and simultaneous stoppage of nearly the whole of the ironworks in South Staffordshire,"—a hopeful prospect this the last quarterly meetings have opened up! The working coal and ironstone miners in this same district also threaten a strike for a rise of wages—6d. a day! This, too, the coal and ironstone masters have "unanimously determined to oppose." Pig-iron is falling in price. Copper remains firm and in good demand: the prices quoted at Truro, 20th July, were, "Average standard, 136*l.* 11*s.*; average produce, 6¼; average price per ton, 6*l.* 6*s.*; quantity of ore, 4,327 tons; quantity of fine copper, 287 tons 7 cwt.; amount of money, 27,841*l.* 3*s.* Last sale: average standard, 137*l.* 17*s.*; average produce, 6¼. Standard of corresponding sale last month, 141*l.* 4*s.*; produce, 6⅜."

Removal of Gasworks from London.—A letter has been sent by Mr. Samuel Clegg, jun. C.E. to the Home Secretary, in which he informs his lordship that a committee of gentlemen, with Mr. James Simpson, the president of the Institution of Civil Engineers, as chairman, proposed to form a new company to manufacture gas for the metropolitan gas companies at a distance from London; the gas to be supplied to the companies in their own retorts in a purified state, prepared and ready for the consumers. The sanitary and other advantages of this plan, Mr. Clegg remarks, would seem to entitle it to the support of the Government, more especially as after mature consideration the prefects of the Seine had seen fit in their new contracts with the Parisian gas companies expressly to stipulate that in 1858 all their gasworks are to be removed out of Paris,—a plan identical with that proposed, only in the present instance the companies will be put to no expense whatever in such removal, the new company bearing the cost.

Large Painting on Glass at Munich.—The largest picture, it is said, on glass of modern times has just been finished at Munich. It is to cover a window in the church of St. Catherine, at Hamburg, 45 feet high and 14⅓ wide. It has been painted by M. Fernster, from designs by Overbeck, representing Our Saviour teaching the Apostles to pray. The work has been executed at the cost of M. Vorbeck, of Hamburg.

New Sewers Commission.—The parochial authorities of Hackney, Whitechapel, and other districts in the borough of Tower Hamlets, have selected Mr. George Offor, the Chairman of the Property, Income, and Assessed Tax Board, for nomination by the borough members as a metropolitan sewers' commissioner.

Alleged Forfeit in Contract.—In a trial which took place lately at Banbury, Mr. John Chesterman, of Abingdon, builder, plaintiff, and Messrs. H. and E. Austen, of Banbury, grocers, defendants, the action was brought to recover 189*l.* balance of a contract for building defendants' premises in High-street, Banbury. The only plea in defence was a set-off, claimed because the plaintiff did not get the work done within the time specified in the contract, whereby 1*l.* a day had been forfeited. Evidence was given which showed that one of the defendants had repeatedly led to delays himself, and that extra works approved by the architect, Mr. Bruton, were also done, and other delays incurred for which plaintiff was not responsible, and the jury returned a verdict for plaintiff to the full amount claimed.

Liverpool Street Improvements.—At the suggestion of the borough engineer, the health committee have adopted a plan for renumbering the houses in many parts of the town, rendered necessary in consequence of alterations in premises and erection of new buildings. The mode suggested is to mark the old numbers black and the new ones red.

Coal in the Metropolis.—The quantity of coals brought into London, by rail and canal, from January 1 to June 30, 1854, was 447,106 tons, being an increase of 40,423 tons on that of same period last year.

Glass Bricks.—Amongst the more recent inventions patented by manufacturers, we hear of one by Mr. Summerfield, of the Glass-works, Birmingham Heath, for what are termed chromatic glass, or glass-faced grooved bricks. By Mr. Summerfield's process, red or other clay can be combined with glass, and this will secure durability, entire resistance to moisture, and give an ornamental appearance to the building. The form of the brick is also, by means of a groove at the side and end, made so as to add greatly to the strength of the erection, the joints by this means being brought close together, and the mortar acts as a dowell from the shape of the groove.

Steam-hammers.—Mr. Thomas Sumner, of Paterson (U.S.), has taken out a patent, under which he varies the direction of the blow, employing for that purpose a hinged or rocking guide frame for the hammer to descend in, with lever to direct the descent, which he does not claim.——Mr. W. Rigby, of Glasgow, has patented some improvements in steam-hammers and pile-driving machinery, by which he claims the use, in those steam-hammers in which the steam is used to raise them only, of a hammer-block, in the form of a ram or plunger, passing through stuffing-boxes, so that on the steam being admitted into the cylinder, its pressure will raise the ram to the required height, and the ram will fall by its own gravity, guided by the cylinder and stuffing-boxes. In those hammers in which the steam is used both to raise and depress the hammer, he claims a method of making the ram work through the bottom only, so that the top of the ram forms a piston for the steam to act upon, both in its ascent and descent.

TENDERS

For alterations to No. 32, Regent-street, for the Royal British Bank. Mr. T. M. Nelson, architect. Quantities supplied.

Gordon	£1,298	0	0
Pollock and M'Lennan	1,297	0	0
Todd	1,199	0	0
Carter and Ellis	1,167	0	0
Macey	1,160	0	0
Rowland and Evans	1,094	0	0
Fish	1,015	0	0

For alterations to No. 3, Norfolk-street, Strand, for the Royal Farmers' Insurance Company. The same architect. Quantities supplied.

Green and Cobb	£1,755	0	0
Fish	1,510	0	0
Todd	1,499	0	0
Macey	1,480	0	0
Pollock and M'Lennan (accepted)	1,262	0	0

TO CORRESPONDENTS.

"*To Restore Writing.*"—A correspondent asks to be informed what will make visible old writing on paper, that has become partly obliterated through age.

"A. W. H." "A. W. M." "Draughtsman." "F. S. A." "Young Architect," "W. H. S." "J. B." "E. C. R" "G. O." "Echo" (we cannot pretend to advise in the abstract). "Constant Reader," "J. S." "P. H. S." (Stevens's stain is much used), "M. H." "T. G." "Holborn Union," "Non Operative" "P. W." "Jack," "A. B. C." "B. C." "Surveyor" (it would be fair to charge a higher commission for measuring "labour and mortar"), "Piccadilly" The height of the Victoria Tower, to the top of the turrets at the angles, will be 346 feet), "E. A. D." "District Surveyor." "A. W. H." "A Subscriber," "*Non Nobis.*" "A. H." "W. G. D." "A. W. H." "W. H. W." "T. L. D." "J. B." "J. R. C." "J. W. M." "Tottenham," "W. C." "H. J. Y." "R. L."

"*Books and Addresses.*"—We have not time to point out books or find addresses.

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